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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,117	07/30/2001	Akira Tsubouchi	18733/00060	2600

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EXAMINER

VAN PELT, BRADLEY J

ART UNIT	PAPER NUMBER
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3682

8

DATE MAILED: 11/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,117

Applicant(s)

TSUBOUCHI ET AL.

Examiner

Bradley J Van Pelt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 4, 5, 9-11 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-3, 6-8, 12, and 13) in Paper No. 7 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 6-8 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claim 6 line 8, it is unclear to how "said plate is one plate acquired by welding a first plate for a rack teeth area for said row of rack teeth is to be formed and a second plate for an area except it."

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

replied
w/draw
claims

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5. Claims 1-3, 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the continuation" in line 7. There is insufficient antecedent basis for this limitation in the claim. In claim 12, line 6 it is unclear to what "it" is referring to.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oya (JP 11-278287) in view of Mori (USPN 4,907,626).

Regarding claim 1, Oya discloses a hollow rack shaft, Fig.A, in part of the surface of which a row of rack teeth along a direction of the axis is formed that the rack is formed by

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bending a substantially rectangular plate so that the two parallel sides are joined, but fails to show, said respective sides have complimentary profiles composed of the continuation of a convex portion and a concave portion so that the sides are engaged when they are joined.

Mori render obvious a cylindrical structure, Fig. 1 and 2, that is formed by bending a substantially rectangular plate so that the two parallel sides are joined and said respective sides have complimentary profiles composed of the continuation of a convex portion and a concave portion so that the sides are engaged when they are joined. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Oya to include complimentary profiles of convex and concave profiles for the purpose of securing the rack together.

Regarding claim 1, applicant is reminded that although the product by process claim is permissible the process in which the product is made cannot be given patentable weight in a product claim. Therefore, since the limitation of "formed cylindrically by bending a substantially rectangular plate so that the two parallel sides are joined" is not given patentable weight, the rack of that of Oya is deemed fully to meet the claimed rack. In other words, the determination of patentability in a product-

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by-process claim is based on the product itself, even though the claim may be limited and defined by the process. The product or article in such a claim is unpatentable if it is the same as or obvious from the product of the prior art, even if the prior product or article was made by a different process. See *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claim 2, Mori renders obvious the width of a part having the largest width of said convex portion is larger than the width of a part having the smallest width of said concave portion; and hereby, said two sides are prevented from being detached. (See Fig.3, along with column 3, lines 17-27).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oya (JP 11-278287) in view of Mori (USPN 4,907,626) as applied to claims 1-2 above, and further in view of Noel (USPN 4,576,846). Noel renders obvious caulking (see column 3 lines 18-31); furthermore, caulking is well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of above reference combination to caulk the convex and concave portions together for the purpose of removing any gaps.

9. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oya (JP 11-278287) in view of Urschel (USPN 1,983,584).

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Regarding claim 12, Oya discloses a hollow rack shaft, Fig.A, which is formed by bending a plate so that the two sides of the plate are joined and in a part of the surface of which a row of rack teeth along a direction of the axis is formed, however, fails to disclose that the rack shaft is provided with a first area and a second areas on both sides of it, and in said two second areas, a complete cylindrical part is formed and at least one of the second areas has a diameter different from the diameter of the semi-cylindrical part in said first area.

Urschel renders obvious a hollow shaft in Fig.20 that is provided with a first area (88) and a second areas (4,40) on both sides of it; and in said two second areas, a complete cylindrical part is formed and at least one of the second areas has a diameter different from the diameter of the cylindrical part in said first area. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Clary to alter the areas of the rack shaft for the purpose of reducing the mass of the shaft.

Regarding claim 12, applicant is reminded that although the product by process claim is permissible the process in which the product is made cannot be given patentable weight in a product claim. Therefore, since the limitation of "formed cylindrically by bending a substantially rectangular plate so that the two

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parallel sides are joined" is not given patentable weight, the rack of that of Oya is deemed fully to meet the instantly claimed invention. In other words, the determination of patentability in a product-by-process claim is based on the product itself, even though the claim may be limited and defined by the process. The product or article in such a claim is unpatentable if it is the same as or obvious from the product of the prior art, even if the prior product or article was made by a different process. See *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claim 13, Urschel renders obvious the diameter of at least one of said second areas is smaller than the diameter of said first area.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For interlocking devices analogous to instant invention see Royce (USPN 1,298,100), Houck (2,762,117), Shaw et al (USPN 2,762,118). For rack devices analogous to instant invention see Ulm (USPN 3,163,925), Belsdorf et al (USPN 3,834,247), Yamawaki (USPN 6,317,979).


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley J


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Van Pelt whose telephone number is (703)305-8176. The examiner can normally be reached on M-Th 7:00-4:30, 2nd F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703)308-3668. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-2168.

BJVP 
November 13, 2002


DAVID A. BUCCI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600